03050109-080

(Saluda River/Lake Greenwood)

General Description

Watershed 03050109-080 is located in Anderson, Greenville, Abbeville, Laurens, Greenwood, and Newberry Counties and consists primarily of the ***Saluda River*** and its tributaries from Big Creek to the ***Lake Greenwood*** dam. The watershed occupies 160,891 acres of the Piedmont region of South Carolina. The predominant soil types consist of an association of the Cecil-Wilkes series. The erodibility of the soil (K) averages 0.25 and the slope of the terrain averages 15%, with a range of 2-45%. Land use/land cover in the watershed includes: 70.5% forested land, 16.2% agricultural land, 5.5% water, 4.5% barren land, 2.6% urban land, and 0.7% forested wetland (swamp).

This section of the Saluda River accepts drainage from Toney Creek, Mountain Creek, Little Creek, and the Broadmouth Creek watershed before forming Lake Greenwood. Turkey Creek accepts drainage from Goose Creek, Gibson Creek (Gypsy Creek), Dunns Creek, and Little Turkey Creek before forming an arm of Lake Greenwood. Mulberry Creek (Dudley Creek) and Camp Branch enters the Turkey Creek arm of the lake. Quarter Creek and Cane Creek drain into the main body of the lake. As a reach of the Saluda River, this watershed accepts the drainage of all streams entering the river upstream of the watershed. Another natural resource in this watershed is Greenwood State Park, which is located on the western shores of Lake Greenwood. Lake Greenwood is used for recreation, power generation, municipal purposes, and water supply. There are a total of 273.0 stream miles and 8,608.0 acres of lake waters in this watershed, all classified FW.

Surface Water Quality

Station #	Type	Class	Description
S-864	BIO	FW	Mountain Creek at SR 51
S-125	P/INT	FW	Saluda River at US 25 bypass, 1.5 miles ESE of Ware Shoals
S-858	BIO	FW	Turkey Creek at SR 96
S-024	W/INT	FW	Lake Greenwood headwaters, just upstream of S-30-33
S-131	P/W	FW	Lake Greenwood at US 221, 7.6 miles NNW of Ninety Six
S-804	BIO	FW	Cane Creek at S-30-19
S-097	S/W	FW	Lake Greenwood, Cane Creek arm at SC 72, 3.1 miles SW of Cross Hill
S-303	W/INT	FW	Lake Greenwood 200 feet upstream of dam

Saluda River (S-125) - Aquatic life uses are fully supported; however, there is a significant decreasing trend in dissolved oxygen concentration and a significant increasing trend in total phosphorus concentration. Fluoranthene was detected in the 1997 sediment sample. Recreational uses are partially supported due to fecal coliform bacteria excursions.

Mountain Creek (S-864) – Aquatic life uses are fully supported based on macroinvertebrate community data.

Turkey Creek (S-858) - Aquatic life uses are partially supported based on macroinvertebrate community data.

Lake Greenwood - Lake Greenwood is an 11,400-acre impoundment on the Saluda River, with a maximum depth of approximately 68.9 feet and an average depth of approximately 23.0 feet. The lake's watershed comprises 779.8 square miles. There are three SCDHEC monitoring sites along Lake Greenwood. At the furthest uplake site ***(S-024)***, aquatic life uses are partially supported due to pH excursions. Recreational uses are fully supported. At the next site downlake ***(S-131)***, aquatic life uses are not supported due to total phosphorus excursions. In addition, there were significant decreasing trends in dissolved oxygen concentration and pH. Significant decreasing trends in five-day biochemical oxygen demand, total nitrogen concentration, and turbidity suggest improving conditions for these parameters. Recreational uses are fully supported at this site. At the furthest downlake site ***(S-303)***, aquatic life and recreational uses are fully supported. The lake was treated with aquatic herbicides from 1993-1995, and again in 1997, and in 1999-2003 by the SCDNR in an effort to control aquatic macrophytes in areas of greatest public use.

Cane Creek (S-804) - Aquatic life uses are fully supported based on macroinvertebrate community data.
Cane Creek Arm of Lake Greenwood (S-097) - Aquatic life uses are not supported due to dissolved oxygen concentration and total phosphorus concentration excursions. In addition, there is a significant decreasing trend in dissolved oxygen concentration and a significant increasing trend in total phosphorus concentration. Prior to 2001, this was a secondary monitoring station and sampling was intentionally biased towards periods with potentially low dissolved oxygen concentrations. There is a significant decreasing trend in pH. Recreational uses are fully supported, but there is a significant increasing trend in fecal coliform bacteria.

A fish consumption advisory has been issued by the Department for mercury and includes portions of a stream within this watershed (see advisory p.39).

Natural Swimming Areas

FACILITY NAME	***PERMIT #***
RECEIVING STREAM	***STATUS***
LAURENS BAPTIST CHURCH	30-N03
LAKE GREENWOOD	ACTIVE
CAMP FELLOWSHIP	30-N04
LAKE GREENWOOD	ACTIVE

Groundwater Quality

Well #	Class	Aquifer	Location
AMB-068	GB	PIEDMONT BEDROCK	CHAPPELS

NPDES Program

Active NPDES Facilities

RECEIVING STREAM / ***FACILITY NAME*** / ***PERMITTED FLOW @ PIPE (MGD)***	***NPDES#*** / ***TYPE*** / ***COMMENT***
SALUDA RIVER TOWN OF WARE SHOALS/DAIRY STREET PIPE #: 001 FLOW: 8.0	SC0020214 MAJOR DOMESTIC
SALUDA RIVER BELTON/DUCWORTH PIPE #: 001 FLOW: 2.5 PIPE #: 002, 003 FLOW: M/R	SC0045896 MAJOR DOMESTIC
SALUDA RIVER TOWN OF WILLIAMSTON PIPE #: 001 FLOW: 1.0	SC0046841 MAJOR DOMESTIC
LAKE GREENWOOD DRIFTWOOD PROPERTY OWNERS ASSOC. PIPE #: 001 FLOW: 0.02	SC0040380 MINOR DOMESTIC
LAKE GREENWOOD WR WISE WTP PIPE #: A10 FLOW: M/R	SCG250099 MINOR INDUSTRIAL
LAKE GREENWOOD WR WISE WTP PIPE #: 01A-C FLOW: M/R PIPE #: 02A-C FLOW: M/R PIPE #: 03A-C FLOW: M/R	SCG641009 MINOR INDUSTRIAL
CAMP BRANCH VULCAN CONSTR. MATERIALS CO./GRNWD QUARRY PIPE #: 01A-C FLOW: M/R PIPE #: 02A-C FLOW: M/R	SCG730051 MINOR INDUSTRIAL
CAMP BRANCH HANSON AGGREGATES SSE/GREENWOOD PIPE #: 01A-C FLOW: M/R PIPE #: 02A-C FLOW: M/R	SCG730252 MINOR INDUSTRIAL

Nonpoint Source Management Program

Land Disposal Activities

Landfill Facilities

LANDFILL NAME / ***FACILITY TYPE***	***PERMIT #*** / ***STATUS***
MONSANTO CO. INDUSTRIAL	------- CLOSED
RIEGEL TEXTILE CORP. INDUSTRIAL	IWP-040 CLOSED

RIEGEL TEXTILE CORP. LANDFILL INDUSTRIAL	IWP-180 CLOSED
THOMAS BUZHARDT PROPERTY INDUSTRIAL	IWP-222 ----------
RIDGE ROAD DUMP DOMESTIC	---------- CLOSED
MICHELIN AMERICA INDUSTRIAL	IWP-189; 303311-1601 --------

Mining Activities

MINING COMPANY ***MINE NAME***	***PERMIT #*** ***MINERAL***
COOPER SAND & GRAVEL COMPANY, INC. SALUDA RIVER MINE	0242-07 SAND
THOMASON CONSTRUCTION TAYLOR MINE OCCASIONAL INSTREAM DIGGING W/DRAGLINE	0944-59 SAND
WR GRACE & CO. EZELL MINE	0987-59 VERMICULITE
WILSON BROTHERS SAND COMPANY, INC. BOLING MINE INSTREAM DREDGING W/DRAGLINE ON SANDBAR	0166-01 SAND
HANSON AGGREGATES SE, INC. WILSON QUARRY	1010-47 GRANITE
TARMAC MID-ATLANTIC, INC. GREENWOOD QUARRY	0134-47 GRANITE

Water Quantity

WATER USER ***STREAM***	***REGULATED CAPACITY (MGD)*** ***PUMPING CAPACITY (MGD)***
GREENWOOD CPW LAKE GREENWOOD	30.0 39.0
BELTON-HONEA PATH WATER AUTHORITY SALUDA RIVER	6.4 10.2

Growth Potential

There is a moderate potential for growth in this watershed, which contains the Town of Ware Shoals and portions of the Towns of Honea Path, Donalds, Hodges, Waterloo, Cross Hill, and Coronaca.

The Towns of Donalds, Hodges, and Ware Shoals are experiencing some growth due to their close proximity to the greater Greenwood area. U.S. 178 (U.S. 25) and rail lines connect the towns to the City of Greenwood, and the potential exists for some industrial growth due to the existing infrastructure. Infrastructure development in the Ware Shoals-Hodges area has encouraged residential and commercial growth. Lake Greenwood has experienced significant growth; however, the growth is expected to continue at a slower pace in the future. U.S. 221 and a major rail line cross this watershed. The major sewer interceptor connects Honea Path with Ware Shoals.

Watershed Protection and Restoration Strategies

Special Projects

The Saluda-Reedy River Consortium

The Saluda-Reedy River Consortium, a privately funded group, was formed in 2002 with the purpose of providing a holistic approach to preserving and improving water quality from the Saluda River headwaters downstream to Lake Greenwood. Using the watershed approach, the consortium is undertaking a comprehensive assessment of all water quality data and sponsoring original research with the aim of fully characterizing water quality conditions and needs. Using this information, the consortium will actively pursue watershed-wide water quality improvement measures.